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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/714,158

11/13/2003

Keith Sinclair

50325-0811

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03/26/2008

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EXAMINER

MOUZON, LAJUANIA N

ART UNIT

PAPER NUMBER

2153

MAIL DATE

DELIVERY MODE

03/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|--|--|
| Office Action Summary | Application No. 10/714,158 | Applicant(s) SINCLAIR ET AL. | |
| | Examiner La Juania N. Mouzon | Art Unit 2153 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-20, 22-30 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-20, 22-30 and 32-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Amendment filed 12/24/2007. Claims 1-9, 11-20, 22-30, and 32-35 are pending. Claims 10, 21, and 31 are canceled.

Claim Objections

2. Claim 15 is rejected to because of the following informalities: claim 15 line(s) 23 has misplaced period. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baekelmans et al. (US 7,080,141) in view of Menard et al. (US 7,065,566).

4. In regards to claims 1 and 22 Baekelmans et al. discloses, a method and a computer-readable storage medium for rule-based network management, the method comprising the computer-implemented and a computer-readable storage medium carrying one or more sequences of instructions for rule-based network management, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

- a. defining and storing a set of rules in one or more Rule-Based Markup Language ("RBML") documents, wherein the one or more RBML documents include one or more tags defining one or more rule elements, and wherein the set of rules includes **(Col. 7 line(s) 42-53 and Col. 9 line(s) 1-7)**:
 - i. a symptom-event rule that identifies as a symptom a particular event occurring **(Col. 9 line(s) 8-16)** within a first network in a plurality of networks **(Col. 7 line(s) 10-19, Col. 10 line(s) 46-49)**; and
 - ii. a problem-diagnosis rule that defines a problem within the network as a correlation between one or more symptoms **(Col. 9 line(s) 29-35)**;
- b. collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule **(Col. 5 line(s) 29-63)**; and
- c. detecting a problem within the network, wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data **(Col. 11 line(s) 13-16)**;

5. Baekelmans et al. do not teach receiving a request from a user to employ a particular rule in managing a second network, separate from the first network; and distributing to a device on the second network the one or more RBML documents storing the particular rule.

6. In the same field of endeavor Menard et al. teaches monitoring of client systems **(fig. 2 #202)** on a different network than the management system server **(fig. 2 #206)**. In which the management system server is able to analyze data collected from the client systems. If the data analyze determines a problem exist the system manager notifies an appropriate collector to run an appropriate corrective script. If the corrective script is configured to be semi-automated then a user approval is need before executing the corrective scrip on the host with the problem **(Col. 16 line(s) 36-44)**. Likewise, the system manager can notify the appropriate user(s), in which a user will configure the corrective actions manager to resolve a problem automatically or on demand **(Col. 12 line(s) 15-21, 39-46)**.

7. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Baekelmans et al. arrangement for automated fault detection and fault resolution of a network device with Menard et al. teaching as discussed above to allow for the capability of executing a script (rules) either automatically or with user intervention to ensure hat the system remains and productive to meet the needs of the business.

8. In regards to claims 2 and 23 Baekelmans et al. discloses, reviewing the set of rules to identify and resolve a conflict between two or more rules in the set **(Col. 9 line(s) 63-67)**.

9. In regards to claims 3 and 24 Baekelmans et al. discloses, storing the one or more RBML documents in a rule repository, wherein the rule repository includes one or more directories containing RBML documents **(Col. 7 line(s) 42-53)**.

10. In regards to claims 4 and 25 Baekelmans et al. discloses, wherein a RBML document storing the problem-diagnosis rule includes: a problem-definition tag describing a problem; and a correlation tag identifying the correlation between one or more symptoms, wherein the one or more symptoms are defined in one or more symptom tags that include one or more pre-defined indicators associated with the one or more symptoms **(Col. 12 line(s) 40-47)**.

11. In regards to claims 5, 12, 26, and 33 Baekelmans et al. discloses, wherein the step of detecting a problem within the network further comprises the steps of:

- d. comparing the symptom-related data to the one or more pre-defined indicators associated with a particular symptom to determine whether the particular symptom exists in the symptom-related data **(Col. 11 line(s) 40-51 and 65-67)**;

- e. repeating the step of comparing the symptom-related data for all symptoms identified in the correlation tag of the RBML document storing the problem-diagnosis rule (**Col. 11 line(s) 40-51 and 66-67**); and
- f. only if all symptoms identified in the correlation tag exist, determining that the problem identified in the problem-definition tag is detected (**Col. 12 line(s) 11-16**).

12. In regards to claims 6 and 27 Baekelmans et al. discloses, wherein a RBML document storing the symptom-event rule includes: an event tag identifying the particular event occurring on the network (**Col. 12 line(s) 40-47**); and a symptom tag identifying a symptom as a generalized abstraction of the particular event (**Col. 12 line(s) 40-47**).

13. In regards to claims 7, 13, 28, and 34 Baekelmans et al. discloses, wherein the RBML document storing the symptom-event rule further includes: a profile tag identifying a particular network device (**Col. 12 line(s) 40-47**); and a command tag identifying a data-collection command, wherein the data-collection command, when executed on the particular network device, returns symptom-related data associated with the particular network device (**Col. 6 line(s) 29-45**).

14. In regards to claims 8 and 29 Baekelmans et al. discloses, the set of rules further includes a problem-correction rule defining one or more corrective actions capable of

correcting the problem within the network (**Col. 12 line(s) 16-19**); and the method further comprises the step of recommending to a user one or more corrective actions defined in a RBML document storing the problem-correction rule (**Col. 12 line(s) 16-19**).

15. In regards to claims 9 and 30 Baekelmans et al. discloses, the step of applying to a network device, without user intervention, one or more corrective actions defined in the problem-correction rule (**Col. 12 line(s) 20-22**).

16. In regards to claims 11 and 32 Baekelmans et al. discloses, a method and a computer-readable storage medium for defining a Rule-Based Markup Language ("RBML") to describe a set of rules for managing a first network among a plurality of networks (**Col. 7 line(s) 10-19, Col. 10 line(s) 46-49**), the method comprising the computer-implemented and a computer-readable storage medium carrying one or more sequences of instructions for defining a Rule-Based Markup Language ("RBML") to describe a set of rules for managing a network, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

g. creating one or more RBML documents for storing the set of rules, wherein the one or more RBML documents include one or more tags defining one or more rule elements (**Col. 7 line(s) 42-53 and Col. 9 line(s) 1-7**), and wherein:

iii. a RBML document storing a symptom-event rule from the set of rules includes (**Col. 9 line(s) 8-16**):

- (1) an event tag identifying a particular event occurring on the network **(Col. 12 line(s) 40-47)**; and
- (2) a symptom tag identifying a symptom as a generalized abstraction of the particular event **(Col. 12 line(s) 40-47)**; and
- iv. a RBML document storing a problem-diagnosis rule from the set of rules includes **(Col. 9 line(s) 29-35)**:
 - (3) a problem-definition tag describing a problem; and a correlation tag identifying a correlation between one or more symptoms, wherein the one or more symptoms are defined in one or more symptom tags that include one or more pre-defined indicators associated with the one or more symptoms **(Col. 12 line(s) 40-47)**; and
- v. generating, from information stored in one or more tags of the one or more RBML documents, one or more sequences of instructions, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of: **(Fig. 4)**
 - (4) collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule **(Col. 5 line(s) 29-63)**; and

(5) detecting a problem within the network (**Col. 11 line(s) 13-16**), wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data (**Col 12 line(s) 20-22**);

17. Baekelmans et al. do not teach receiving a request from a user to employ a particular rule in managing a second network, separate from the first network; and distributing to a device on the second network the one or more RBML documents storing the particular rule.

18. In the same field of endeavor Menard et al. teaches monitoring of client systems (**fig. 2 #202**) on a different network than the management system server (**fig. 2 #206**).

In which the management system server is able to analyze data collected from the client systems. If the data analyze determines a problem exist the system manager notifies an appropriate collector to run an appropriate corrective script. If the corrective script is configured to be semi-automated then a user approval is need before executing the corrective scrip on the host with the problem (**Col. 16 line(s) 36-44**). Likewise, the system manager can notify the appropriate user(s), in which a user will configure the corrective actions manager to resolve a problem automatically or on demand (**Col. 12 line(s) 15-21, 39-46**).

19. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Baekelmans et al. arrangement for automated

fault detection and fault resolution of a network device with Menard et al. teaching as discussed above to allow for the capability of executing a script (rules) either automatically or with user intervention to ensure hat the system remains and productive to meet the needs of the business.

20. In regards to claims 14 and 35 Baekelmans et al. discloses, the step of creating one or more RBML documents further includes creating a RBML document for storing a problem-correction rule defining one or more corrective actions capable of correcting the problem within the network (**Col. 12 line(s) 20-22**); and the step of generating instructions includes generating one or more sequences of instructions, which instructions, when executed by the one or more processors, cause the one or more processors to carry out the step of recommending to a user the one or more corrective actions defined in the RBML document storing the problem-correction rule (**Fig. 4**).

21. in regards to claim 15 Baekelmans et al. discloses, an apparatus for rule-based network management, comprising:

h. a rule editor for creating and storing, in one or more Rule-Based Markup Language ("RBML") documents containing one or more tags, a set of rules employed in managing a first network among a plurality of networks (**Col. 7 line(s) 10-19, Col. 10 line(s) 46-49**), wherein the set of rules includes (**Col. 9 line(s) 63-67**):

- vi. a symptom-event rule that identifies as a symptom a particular event occurring within the network (**Col. 9 line(s) 8-16**); and
 - vii. a problem-diagnosis rule that defines a problem within the network as a correlation between one or more symptoms (**Col. 9 line(s) 29-35**);
 - i. one or more processors (**Fig. 1 #24**);
 - j. a diagnosis engine including one or more stored sequences of instructions which, when executed by the one or more processors, cause the one or more processors to carry out the steps of (**Col. 7 line(s) 54-61**):
 - viii. collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule (**Col. 5 line(s) 29-63**); and
 - ix. detecting a problem within the network (**Col. 11 line(s) 13-16**), wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data (**Col 12 line(s) 20-22**);
 - k. a rule broker configured to receive a request from a user to apply a particular rule in managing a second network, separate from the first network, and to distribute to a device on the second network the one or more RBML documents storing the particular rule (**Col. 9 line(s) 44-49**).
22. Baekelmans et al. do not teach receiving a request from a user to employ a particular rule in managing a second network, separate from the first network; and

distributing to a device on the second network the one or more RBML documents
storing the particular rule.

23. In the same field of endeavor Menard et al. teaches monitoring of client systems **(fig. 2 #202)** on a different network than the management system server **(fig. 2 #206)**.

In which the management system server is able to analyze data collected from the client systems. If the data analyze determines a problem exist the system manager notifies an appropriate collector to run an appropriate corrective script. If the corrective script is configured to be semi-automated then a user approval is need before executing the corrective scrip on the host with the problem **(Col. 16 line(s) 36-44)**. Likewise, the system manager can notify the appropriate user(s), in which a user will configure the corrective actions manager to resolve a problem automatically or on demand **(Col. 12 line(s) 15-21, 39-46)**.

24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Baekelmans et al. arrangement for automated fault detection and fault resolution of a network device with Menard et al. teaching as discussed above to allow for the capability of executing a script (rules) either automatically or with user intervention to ensure hat the system remains and productive to meet the needs of the business.

25. In regards to claim 16 Baekelmans et al. discloses, wherein the rule editor is capable of providing to a user means for reviewing the set of rules to identify and resolve a conflict between two or more rules in the set **(Col. 9 line(s) 63-67)**.

26. In regards to claim 17 Baekelmans et al. discloses, the problem-diagnosis rule defining the correlation between one or more symptoms includes one or more pre-defined indicators associated with the one or more symptoms **(Col. 9 line(s) 29-35)**; and the diagnosis engine instructions for carrying out the step of detecting a problem within the network further include instructions **(Col. 7 line(s) 54-61)** for carrying out the steps of:

- l. comparing the symptom-related data to the one or more pre-defined indicators associated with a particular symptom to determine whether the particular symptom exists in the symptom-related data **(Col. 11 line(s) 40-51 and 65-67)**;
- m. repeating the step of comparing the symptom-related data for all symptoms identified in the correlation tag of the RBML document storing the problem-diagnosis rule **(Col. 11 line(s) 40-51 and 66-67)**; and
- n. only if all symptoms identified in the correlation tag exist, determining that the problem identified in the problem-definition tag is detected **(Col. 12 line(s) 11-16)**.

27. In regards to claim 18 Baekelmans et al. discloses, wherein the symptom-event rule further includes: information identifying a particular network device (**Col. 9 line(s) 9-11**); and a data-collection command, wherein the data-collection command, when executed on the particular network device, returns symptom-related data associated with the particular network device (**Col. 9 line(s) 16-19**).

28. In regards to claim 19 Baekelmans et al. discloses, the set of rules further includes a problem-correction rule defining one or more corrective actions capable of correcting the problem within the network (**Col. 12 line(s) 16-19**); and the diagnosis engine further includes instructions which, when executed by the one or more processors, cause the one or more processors to carry out the step of recommending to a user one or more corrective actions defined in the problem correction rule (**Fig. 4**).

29. In regards to claim 20 Baekelmans et al. discloses, wherein the diagnosis engine further includes instructions which, when executed by the one or more processors, cause the one or more processors to carry out the step of applying to a network device, without user intervention, one or more corrective actions defined in the problem-correction rule (**Col. 12 line(s) 20-22**).

Response to Arguments

30. Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

31. The applicant argues, "In addressing original claim 10, the Office Action contends that Baekelmans discloses a first network in a plurality of networks in the form of the Internet. (Office Action, page 8, paragraph 15.) This reflects an incorrect interpretation of applicants' claims and disclosure. The "network" referenced in the claims is a managed network, because the claimed approach recites monitoring events of network devices and it is only possible to receive event data from devices that are managed in some way. In Baekelmans, only one set of "customer premises resources 12" is shown, not a plurality of sets of managed customer premises resources 12. Baekelmans clearly shows customer premises resources 12 separate from Internet 17 to distinguish the two. (remarks, pg. 15)." Baekelman et al. disclose monitoring devices a plurality of networks (**Col. 7 line(s) 10-19, Col. 10 line(s) 46-49**). Wherein the data is collected by a plurality of customer premises resources 12 and distributed data collection engines (DDCE) 24, geographically located by regions, and processed by the centralized support resources 14 (**Col. 7 line(s) 10-19**).

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Richardson (US 6,317,788) robot policies for monitoring availability and response of network performance as seen from user perspective.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to La Juania N. Mouzon whose telephone number is 571-270-3045. The examiner can normally be reached on Monday - Friday 8:00-5:00, 1st Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LNM

/Yasin M Barqadle/

Primary Examiner, Art Unit 2153